

Claims

1. Toothbrush with a toothbrush head (12; 212; 312; 412; 512; 612) supported by a toothbrush body (10; 210; 310; 410; 510; 610), the toothbrush head (12; 212; 312; 412; 512; 612) comprising:
 - a bristle carrier (20; 220; 320; 420; 520; 620) receiving bristles, the bristle carrier (20; 220; 320; 420; 520; 620) pivotally supported for pivoting about a pivot axis (R) and adapted to be pivotally and reversibly driven by an eccentric drive (40, 50, 52), wherein
 - the eccentric drive has a drive shaft (50) rotating in one direction and arranged perpendicular to the pivot axis (R) of the bristle carrier (20; 220; 320; 420; 520; 620) and centrally penetrating the toothbrush body (10; 210; 310; 410; 510; 610), with an end face of the drive shaft (50) having an eccentric pin (52), wherein
 - the bristle carrier (20; 220; 320; 420; 520; 620) has a guide bore or a guide channel (32; 128; 228; 328; 428; 528; 628) extending in the axial direction, with the eccentric pin (52) guided in the guide bore or guide channel, characterized in that the bristle carrier (20; 220; 320; 420; 520; 620) is supported on the toothbrush head (12; 212; 312; 412; 512) for movement in the axial direction and adapted to be reversibly driven by the eccentric drive (40, 50, 52) so as to move backward and forward along a linear path.
2. The toothbrush according to claim 1, characterized in that the toothbrush head (12, 212) has at least one bearing channel (14, 214) adapted to engage with at least one corresponding bearing projection (24, 224) which limits the backward and forward linear motion (stroke) of the bristle carrier (20, 220).
3. The toothbrush according to claim 1 or 2, characterized in
 - that a sliding block (30; 230) is provided which includes a drive-pin bore (32; 232) or a guide channel adapted to engage with the eccentric pin (52), and
 - that the sliding block (30; 230) is axially affixed in the guide channel (28; 228) or axially moveable therein between limit stops.
4. The toothbrush according to claim 1, characterized in
 - that the bristle carrier (320; 420; 520) has at least one drive-pin channel (324; 424; 524) which is disposed along a circumferential segment of the bristle carrier (320; 420; 520) and inclined in the axial direction, and

- that at least one drive pin (314; 414; 514) which is guided in the drive-pin channel (324; 424; 524), is disposed on the toothbrush head (312; 412; 512).

5. The toothbrush according to claim 4,

5 characterized in that two diametrically opposed guide pins (314) are disposed on the toothbrush head (310).

6. The toothbrush according to one of the claims 4 or 5,

characterized in that the guide channel (628) is formed directly in the bristle carrier (620).

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7. The toothbrush according to one of the claims 4 or 5,

characterized in that the guide channel is a part of a sliding block which is axially affixed to the bristle carrier.

15 8. The toothbrush according to one of the claims 4 or 5, characterized in

- that a sliding block (430; 530) is supported for axial displacement in the guide channel (328; 428; 528), and

20 - that the sliding block (330; 430; 530) has a drive-pin bore (332; 432; 532) adapted to engage with the eccentric pin (52).

9. The toothbrush according to one of the claims 3, 7 or 8,

characterized in that the sliding block (130; 230; 330; 430) has a cylindrical shape.

25 10. The toothbrush according to one of the claims 3, 7 or 8,

characterized in that the sliding block (530) has a spherical shape.

Summary

Toothbrush

- 5 A toothbrush is disclosed which has a toothbrush head (12) supported by a toothbrush body (10). The toothbrush head (12) has a bristle carrier (20) which receives the bristles and is pivotally supported for pivoting about a pivot axis (R) and can be reversibly driven by an eccentric drive (40, 50, 52). The eccentric drive (40, 50, 52) has a drive shaft (50) which rotates in one direction, wherein the drive shaft (50) extends perpendicular to the pivot axis (R) of the bristle carrier (20)
- 10 and penetrates the toothbrush body (10) in the center. The end face of the drive shaft (50) has an eccentric pin (52). The bristle carrier (20) also includes a guide bore or a guide channel (32) extending in an axial direction, with the eccentric pin (52) being guided in the guide bore or guide channel. The bristle carrier is also supported on toothbrush head (12) for axial displacement and can be reversibly driven backward and forward by the eccentric drive (40, 50, 52).